

Enhancement of Project Performance through Risk Management and Monitoring & Evaluation with Moderating Role of Project Manager Decisional Skills

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Abstract

The major issue of concern right now is how to run a project successfully and efficiently. The ultimate goal is to achieve a project performance and information technology is becoming noticeably progressively centered on projects because of market dynamism and rivalry. There might be a few elements that can influence project performance; however, this research concentrates on risk management (RM), Monitoring & evaluation (M&E), project manager decisional skills (DS) and its effect on project performance (PP). Researches prove the significance of risk management at any level or any type of organizations and monitoring & evaluation is a key project performance factors. The research is based on empirical studies and quantitative research based on the questionnaire. 239 IT sector employees was taken to examine the relationships between risk management to project performance, Monitoring & evaluation to project performance and project manager decisional skills to project performance. The moderating role of project manager decisional skills also examined in RM-PP and ME-PP relationship. 4 hypotheses were being tested in which all of them comes out to be significant and correlated positively. Result shows that factors have significant impact on the project performance. The results show that risk management and monitoring & evaluation contribute in the project performance. Results have also shown that project management decisional skills moderate the relation between risk management and monitoring & evaluation on project performance. Practical implications of the study are presented based on the results.

Keywords: M&E, Risk Management, Project Manager Decisional skills, Project Performance.

Introduction

The performance of a project has been portrayed as the level of accomplishment of the project destinations with regards to quality, cost and time (Chitkara, 2005). Laedre, Austeng, Haugen, & Klakegg (2006) contend that in order to enhance project performance, it is essential to better understand how obtainment procedures influence diverse parts of project performance. The performance measurement system is widely researched in profit oriented organizations (Yap and Ferreira, 2010).

The fast movement of development, the extending unpredictability of operations and the growing rivalry in the market have made project management fundamental to affiliations (Ofori, 2014).

In any case, the success of any development project in public or private sector depends on the project supervisor's staff arrangement and control, and strict monitoring of time, costs, materials, quality and natural requirements (Nwachukwu and Fedelis, 2011). Gupta (2010) argues that a manager of a development project must evaluate each situation, taking into account their distinction from the other, and then pick the appropriate management approach. For a project, lot of studies focusing on risk management to the detriment instability administration (Meyer, Loch & Pich 2002; Pich, Loch & Meyer 2002; Atkinson, Crawford and Ward 2006; Perminova, Gustafsson & Wikstrom 2008; Cleden, 2012), also, that risk management systems and vulnerabilities may require unmistakable approaches. Risk management is regularly not utilized or not comprehended, the individuals who execute risk management forms in their projects can have a noteworthy competitive advantage (Kwak and Stoddard, 2004).

Monitoring and evaluation is significant part of the administration cycle incorporating into arranging and design of projects (Gyorkos, 2003). The adequacy of project monitoring and evaluation also relies on upon the approach taken for M and E. Stem, Margoluis, Salafsky & Brown (2005) found that a portion of the monitoring and evaluation approaches that can be connected by project managers and monitoring teams include: essential research; accounting and accreditation; evaluation of status; and estimation of adequacy.

The adequacy of decision-making, which is the responsibility of the project administrator, has been recognized as one of the most vital success variables for construction projects (Gudienė, 2013). The way in which a project manager settles on a decision is crucial on the grounds that decision-making forms determine the proficiency and adequacy of a project (Anantatmula, 2010). Decision-making is an integral piece of the administration procedure within every organization and at all levels (Davis, Grove and Knowles, 1990).

Ngure (2013) led a review on monitoring and evaluation and project performance and concentrated on a specific sort of project in a city in Kenya. Some ones studied have concentrated diverse sorts of projects and a management approach adjusted to the particular sort (Kerzner, 2013). The analyst prescribes that comparative examinations are directed in various areas of the nation.

Furthermore, the effect of risk management and monitoring and evaluation of the proficiency and inspiration of the devotees has been documented (Carvalho and Rabechini, 2015). Some papers have recognized decision making skill as a basic ascribe to possess (Bernroider and Mitlohner, 2015), yet no review have been found that specifically interfaces this skill to performance, which legitimizes additionally investigation.

Different reviews have archived the measurements of risk management and monitoring and evaluation and their relationship to project performance with an accentuation on perceived magnitude. This study is contributed two dimensional viewpoints; First, it is an addition documentation on risk management and monitoring and evaluation, and secondly to show, how the project manager basic decisional skills have empowered the performance of the projects. Information Technology is a developing industry. An ever increasing number of organizations are outsourcing their IT advantages for outer suppliers. Commonly, IT outsourcing exercises are formalized as various projects, which may include building another software application or keeping up a current programming application. Moreover, Gray and Larson (2003) found that software advancement projects are as often as possible completed over spending plan and deferral.

Research Objectives

The objectives of the study are as follows:

- ✓ To analyze the impact of risk management on project performance.
- ✓ To analyze the impact of monitoring and evaluation on project performance.
- ✓ To analyze the impact of project manager decisional skills on project performance.
- ✓ To find out the combine impact of risk management, monitoring and evaluation and project manager decisional skills on project performance.

Literature Review

The aim behind this research is to examine the impact of monitoring and evaluation and risk management on project success with the moderating role of project manager decisional skills of IT sector in Pakistan. Researcher findings will definitely help the IT organizations management, project managers, employees, investors, analysts and the general public.

2.1 Monitoring & Evaluation and Project Performance:

Monitoring and evaluation is a critical part of the management cycle, including project planning and outline (Gyorkos, 2003). Project planners ought to adjust monitoring and evaluation exercises in the project plan with components, for example, persons to carry out the evaluations, recurrence, budget of exercises and particulars on the most proficient method to report and to utilize the outcomes. An monitoring and evaluation budget must be produced and incorporated into the general spending plan of the project so as to give the monitoring and evaluation work its appropriate place in project management (Gyorkos, 2003).

According to Hwang and Lim (2012) Monitoring and evaluating, budget performance, schedule performance and quality performance could lead to project success. Jody and Ray (2004) distinguished correlative parts of the two capacities. Information from monitoring feeds, evaluation to pick up an understanding and learn lessons in the center or toward the finish of the venture as to what went ideal to work for learning purposes. This could help update the project.

Evaluations ought to be completed by individuals with relevant abilities, sound techniques and satisfactory assets, and transparency to guarantee quality (Jones et al., 2009). The evaluation helped bosses and organizers survey supportability (Stem, Margoluis, Salafsky and Brown, 2005).

Monitoring and evaluation of projects can be of incredible importance to different performers, including project defenders, as they will recreate comparable projects in different ranges, as exhibited by the different projects attempted by the financial division which Revolve around a couple of territories (Marangu, 2012).

H1: Monitoring & Evaluation has a significant or positive impact on Project performance.

2.2 Risk management and Project Performance:

Risk management incorporates coordinating the essential standards of risk approach, setting up risk mindfulness and authoritative joining. It is a driving force for the risk management process and is in charge of risk control in full learning of the present risk circumstance (Diederichs, 2013). In reality, as indicated by Stoica and Constantin (2012), risk can be characterized as the likelihood of the rise of an arbitrary and unusual occasion that would influence the accomplishment of specialized targets/cost objectives or project terms.

De Bakker, Boonstra and Wortmann (2012) recommend that risk management exercises add to the success of the project through four distinct impacts: activity, observation, desire and relationship. An arrangement of studies in the IT field has associated between risk management and project performance (Yetton et al., 2000; Kwak and Stoddard, 2004; Na et al, 2004; Han et al., 2007; Jiang et al., 2009). Regardless, their results are debatable in light of the way that some of these reviews have shown that risk management has little impact on

project success (Ropponen and Lyytinen, 2000; Zwikael and Globerson, 2006). In the review directed by Bakker, Boonstra and Wortmann (2012), the vast majority of the stakeholders said this is the most basic variable. De Bakker, Boonstra and Wortmann (2012) demonstrate that the essential stresses of stakeholders are risk reports, risk records, risk allocation, risk control and risk analysis.

H2: Risk Management has a significant or positive impact on Project performance.

2.3 Project Managers Decisional Skills as a moderator:

Project decision-making is very troublesome without context challenges. Researcher always encounter the routine exchange offs of time versus cost; or time and cost, contrasted with quality. Regularly need to settle on choices to decisions the probable risks, or to ignore them. The difficulties increase with poor project planning, poor status tracking or change control, moderate revealing of open inquiries, or inability to settle on imperative decisions rapidly. Chan and Kumaraswamy (2002) additionally categorize comparable factors in a gathering that underscores correspondence and human resource management.

Kirsch (2000) has highlighted that successful project management requires both hard and delicate skills. Thite (1999) emphasized that IT officials require specialized authority transformational leadership skills. As past research has found (eg, Byrd and Turner, 2001), both hard and soft skills are required to accomplish higher performance.

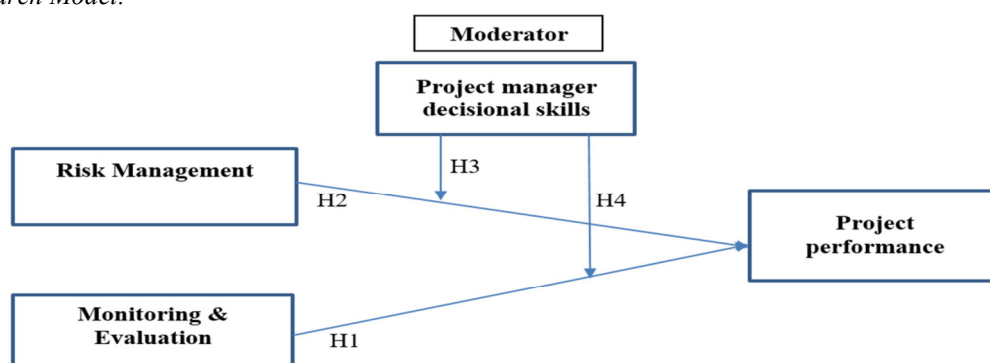
Leadership decision-making is a basic ability and instrument for most business operations. Barret, Balloun and Weinstein (2005) depicted leadership decision-making in associations as the way toward utilizing basic intuition to upgrade a decision. Organizational leaders and managers ought to make a participatory atmosphere by sharing data and connecting with workers in decision-making (Tesluk et al., 1999; Wanous et al., 2000). Urging workers to express their thoughts regarding proficient concerns is the act of data sharing (Cabrera et al., 2003). The dynamic way of any business demonstrates that leadership and sound decision-making in every association must be the immediate consequence of leaders and managers of their prosperity criteria, the extent of their decisions, and the innate risk of each alternative (Nelson and Quick, 2003). Decisions are basic and appear to advance, while others are mind boggling and require a multi-step way to deal with making decisions (Dietrich, 2010). A few reviews have recognized decision-making skills as a vital property (Gushgari, Francis and Saklou, 1997; Odusami, 2002; Crawford, 2000), however no review has been found that specifically interfaces this capability to performance.

The project manager is presumably the most vital individual in a project. It is frequently seen as a review for the specialized and building decisions taken for the project. In addition, as more vital capacities are IT actuated and outsourced, the project director should likewise show an exhaustive learning of the business destinations of the IT framework provided (Sprout, 1996). Prior literature has demonstrated that the nature of the undertaking enhances performance (Campbell, 1988; Goodman and Leyden, 1991). Some work has been done in identifying decision making skill as an important attribute to possess (Gushgari, Francis, & Saklou, 1997; Valencia, 2007; Odusami, 2002; Crawford, 2000); but no studies have been found that directly link this skill to performance, warranting further investigation.

H3: Project manager decisional skills moderates significant or positively between risk management and Project Performance.

H4: Project manager decisional skills moderates significant or positively between monitoring and evaluation and project performance.

2.4 Research Model:



3. Research Methodology

3.1 Type of research

It is theoretical testing study whose sample consists of employees working in IT sector organizations located in

Rawalpindi/Islamabad. Data was collected from various multinational, well reputed IT sector organizations. Research access to these IT sector organizations located in Rawalpindi/Islamabad was gotten through the personal references and approach of the writer. Each respondent of said organizations was personally briefed about the survey items and all queries were addressed before getting back questionnaires.

3.2 Population and Sampling

Population is “the group of people, events or things of interest that the researcher wishes to investigate” (Cavana & Sekaran, 2001). The main objective of the study determines population which is monitoring & evaluation users, technical staff and/or project team members working in the IT sector organizations located in Rawalpindi and Islamabad. Study consists of employees working in targeted population organizations. Data collected from organization representing different sectors and represent various sector to create diversity in the study. All data collected by convenient sampling from two big cities of Pakistan i.e. Islamabad and Rawalpindi.

Research questionnaire elaborate the horizon and scope of the study and respondents were assured off the confidentiality of their replies. Total 350 questionnaires were floated. Out of which 254 were returned back and only 239 was usable. The response rate was 68.29%.

4. Results and Discussions

Table 1 Reliability Analysis

Variable	Cronbach's Alpha
Risk Management	.874
Monitoring & evaluation	.879
Decisional skills	.851
Project Performance	.829

Result of reliability analysis in Table 1 indicate that Cronbach's alpha values of all the variables, individually and collectively are > 0.6 which shows that the data gathered through questionnaire is reliable. Risk management Cronbach's alpha is 0.874, monitoring & evaluation Cronbach's alpha is 0.879, decisional skills Cronbach's alpha is 0.851, project performance Cronbach's alpha is 0.829.

Table 2 Correlation Analysis

S. No	Variables	RM	M&E	DS	PP
1.	Risk Management	1			
2.	Monitoring & evaluation	.122	1		
3.	Decisional skills	.146*	.244**	1	
4.	Project Performance	.872**	.215**	.213**	1

** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Risk management has positive and significant relationship with project performance with ($r = .872, p < .05$) which means that risk management as an independent variable does have considerable relationship with project performance. The second variable, the monitoring & evaluation, also have significant and positive relationship with the project performance with ($r = 0.263, p < .05$). Decisional skills has positive relationship with the project performance with ($r = 0.213, p < .05$), which means that decisional skills has positive and significant relationship with dependent variable.

Table 3 Regression

Predictors	Organizational performance enhancement		
Step 1	β	R^2	ΔR^2
Age (Control Variable)	.103***		
Experience (Control Variable)	.104**	.079	.079
Step 2	β	R^2	ΔR^2
Risk Management	.429***		
Monitoring & evaluation	.137***		
Decisional Skills	.248**	.046	.046
Step 3	β	R^2	ΔR^2
Risk Management x Decisional Skills	.083**		
Monitoring & evaluation x Decisional Skills	.266**	.161	.019

a. Predictors: (Constant), RM_Mean, ME_Mean, DS_Mean

b. Predictors: (Constant), RM_Mean, DS_Mean, RMxDS

c. Predictors: (Constant), ME_Mean, DS_Mean, MExDS

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

Table 3 stated the regression analysis results. The above table described that risk management has positive

impact on project performance as the value indicated in table ($\beta = .429$, $p < .05$). Monitoring & evaluation has positive and significant impact on project performance as per shown the tabulated values ($\beta = .137$, $p < .05$). The value of decisional skills and project performance is ($\beta = .248$, $p < .05$) which show the decisional skills strong impact on project performance. Value is ($\beta = .083$, $p < .05$) which depicted the positive and significant impact. Moreover, decisional skills support also moderates the relationship between M&E and project performance. As the values indicated in the table is ($\beta = .266$, $p < .05$) which depicted the strong and significant impact.

4.1 Summary of Hypothesis Results

Table 4 Hypothesis Summary

Serial	Hypothesis	Results
H1	Monitoring & Evaluation has significant and positive impact on the Project performance.	Supported
H2	Risk Management has significant and positive impact on the Project performance.	Supported
H3	Project manager decisional skills moderates significant and positively between risk management and project performance.	Supported
H4	Project manager decisional skills moderates significant and positively between monitoring & evaluation and project performance.	Supported

Research Findings and Recommendations

5.1 Research Findings

It is evident from the literature and data collected from the users of different IT sector organizations that monitoring and evaluation, risk management implementation impacts the project performance in cultural and corporate settings of Pakistan. The objective of this study was to analyze the ground realities of monitoring and evaluation, risk management and impact of risk management, monitoring and evaluation and decisional skills on project performance. Findings of the study are as under: -

- IT sector organizations have been selected for data collection keeping in view the study objectives.
- Risk management, monitoring and evaluation under study have been proved dependable and trustworthy which proves that they are project performance enhancement factors.
- The study examined the moderating role of decisional skills which could play a pivotal role which will eventually result in enhanced project performance.
- The study will contribute as a new opening for risk management, monitoring and evaluation & decisional skills to improve project performance.

5.2 Implications and Recommendations of Research

Objective of the study was to analyze the impact of risk management, monitoring and evaluation on project performance in IT sector organizations in Rawalpindi/Islamabad. The research also proved that decisional skills has a significant effect on project performance under study. Following are the recommendations of the study:

- All IT sector organizations necessitate to carry out work upon the monitoring and evaluation, risk management that contribute to project performance in order to improve the system performance.
- The study indicated that the organizations that make use of project manager decisional skills and monitoring and evaluation practices on a wider scale generate project performance.

5.3 Limitations of the Study

This research explored the impact of risk management, monitoring and evaluation on project performance enhancement in different organization located in Rawalpindi and Islamabad with following limitations: -

- Although, study specifically focused on IT sector organization of Rawalpindi/Islamabad, therefore findings may not apply to similar organization located in other parts of the country.
- Additionally, there are other types of project manager skills which contribute to project performance that may be studied and explored to improve the success of project.
- The study was a cross sectional study therefore its findings may not be pertinent for longitudinal purposes.

5.4 Future Research

Initially, the responses apropos risk management, project manager decisional skills, project performance and monitoring and evaluation were given by employees of IT industry of Rawalpindi and Islamabad, who have very little knowledge of these terminologies. To upgrade outer legitimacy, the future research endeavors may acquire

a greater sample size from different associations and ventures too. Second, we explored the relationship of risk management and monitoring and evaluation on Project performance in the presence of decisional skills only, while future researches ought to go further by integrating other project manager skills types as moderator variables. Further research is needed to authenticate the validity and reliability of the tools outside Pakistan and to assist making a generalization that authentic leadership and project manager decisional skills positively impact on project performance. However, future researchers need to focus more on studying other types of project manager skills in cultural and corporate settings of Pakistan. Moreover, future research also need to focus on multinational organizations located in other parts of the country.

5.5 Conclusion

It was clear from the results that risk management, monitoring & evaluation and decisional skills have positive and significant impact on project performance. In moderation testing it was clear that decisional skills moderate the relationship between risk management, monitoring & evaluation and project.

Appendix

Dear Respondent,

I am MS scholar at Riphah International University Islamabad, intending to conduct research on “**Impact of risk management and monitoring & evaluation on project performance with moderating role of project manager decisional skills**”. In this regard, i have prepared the following questionnaire, and request you to kindly fill all the questions and return the questionnaire. I appreciate you for sparing time from your busy schedule for this purpose. Please note that, on one hand, this research is expected to contribute good insights aiming at an overall improvement in organizational setup. Your answers will be kept strictly confidential and will be used only for research purpose. Your identity will be not disclosed on this document so kindly give an honest opinion to make this research unbiased.

You are requested to take 15 minutes out of your busy schedule to fill this questionnaire. Although you are not bound to answer these questions and at any point in time, you can quit answering but still I will be privileged by your opinion in this research work.

Once again thanks for your precious time and cooperation

Regards,

Raja Saqib Yameen

Research Scholar

(Please tick the appropriate checkbox below)

Age <input type="checkbox"/> 22-30 <input type="checkbox"/> 41-45 <input type="checkbox"/> 31-35 <input type="checkbox"/> 46-50 <input type="checkbox"/> 36-40 <input type="checkbox"/> 50 or above	Gender <input type="checkbox"/> Male <input type="checkbox"/> Female	Highest Level of Education <input type="checkbox"/> Bachelors or low <input type="checkbox"/> Masters <input type="checkbox"/> Diploma <input type="checkbox"/> other	Years with this Organization <input type="checkbox"/> Less than a year <input type="checkbox"/> 6-10 yrs. <input type="checkbox"/> 1-5 yrs. <input type="checkbox"/> 10 or above
Monthly Earning (income) <input type="checkbox"/> Below 30,000 <input type="checkbox"/> 51,000- 60,000 <input type="checkbox"/> 31,000-40,000 <input type="checkbox"/> Above 60,000 <input type="checkbox"/> 41,000-50,000		Position: <input type="checkbox"/> Upper level <input type="checkbox"/> Middle level <input type="checkbox"/> Lower level	

Section 2:

(Please encircle the appropriate number given against each statement)

Risk Management	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. We always identify all relevant risks.	1	2	3	4	5
2. We have a good understanding of the scope in which the risks can influence our goals.	1	2	3	4	5
3. Risk information helps us in the realization of decisions.	1	2	3	4	5
4. Risk information helps us influence decisions.	1	2	3	4	5
5. Risk information helps us make good decisions.	1	2	3	4	5
6. We check to see whether problems from one project can transfer to other projects	1	2	3	4	5
7. We check to see whether individual risks can interact and accumulate to grow into risks threatening the survival of the company.	1	2	3	4	5
8. We check to see whether problems from one project can lead to bottlenecks in other projects	1	2	3	4	5
9. We check to see whether additional risks arise due to the portfolio structure.	1	2	3	4	5

Project Performance	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
10. Projected goals were met.	1	2	3	4	5
11. The expected amount (scope) of work was completed.	1	2	3	4	5
12. Completed work was of a high quality.	1	2	3	4	5
13. The schedule was adhered to.	1	2	3	4	5
14. The budget was adhered to.	1	2	3	4	5
15. Task operations were carried out efficiently.	1	2	3	4	5

Project Manager Decisional Skills	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
16. Project manager sees her/himself as someone who conforms.	1	2	3	4	5
17. Project manager is prudent when dealing with authority or general opinion.	1	2	3	4	5
18. Project manager fits readily into "the system."	1	2	3	4	5
19. Project manager never acts without proper authority.	1	2	3	4	5
20. The project manager has fresh perspectives on old Problems.	1	2	3	4	5
21. Project manager see her/himself as someone who is stimulating."	1	2	3	4	5
22. Project manager can cope with several new ideas and problems at the same time.	1	2	3	4	5
23. Project manager have original ideas.	1	2	3	4	5
24. Project manager see her/himself as someone who proliferates ideas.	1	2	3	4	5

Monitoring & Evaluation	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
25. The M&E function within my department is well located and adequately capacitated.	1	2	3	4	5
26. The M&E component adds value to my work as a manager, in that it produces useful management tools and information.	1	2	3	4	5
27. The M&E component is sufficiently integrated into the institutional management arrangements of the department to add value.	1	2	3	4	5
28. The M&E component has not managed to produce value to the management of the department.	1	2	3	4	5
29. The department takes M&E seriously, and sees M&E as a critical management tool.	1	2	3	4	5
30. All important aspects of the project are monitored, including measures that will provide a complete picture of the project's progress.	1	2	3	4	5
31. Regular meetings to monitor project progress and improve the feedback to the project team are conducted.	1	2	3	4	5
32. Actual progress is regularly compared with the project schedule.	1	2	3	4	5
33. The results of project reviews are regularly shared with all project personnel who have impact upon budget and schedule.	1	2	3	4	5
34. When the budget or schedule requires revision, input is solicited from the project team.	1	2	3	4	5

References

- Alexa, M., Stoica, C. M., & Constantin, B. (2012). The assessment of risks that threaten a project. *Lex ET Scientia International Journal (LESIJ)*, 19(2), 245-261.
- Anantatmula, V. S. (2010). Project manager leadership role in improving project performance. *Engineering Management Journal*, 22(1), 13-22.
- Atkinson, R., Crawford, L., & Ward, S. (2006). Fundamental uncertainties in projects and the scope of project management. *International journal of project management*, 24(8), 687-698.
- Barrett, H., Balloun, J. L., & Weinstein, A. (2005). The impact of creativity on performance in non - profits. *International Journal of Nonprofit and Voluntary Sector Marketing*, 10(4), 213-223.
- Bernroider, E. W., & Mitlohner, J. (2015). Characteristics of the multiple attribute decision making methodology in enterprise resource planning software decisions. *Communications of the IIMA*, 5(1), 6.
- Byrd, T. A., & Turner, D. E. (2001). An exploratory analysis of the value of the skills of IT personnel: Their relationship to IS infrastructure and competitive advantage. *Decision Sciences*, 32(1), 21-54.
- Cabrera, E. F., Ortega, J., & Cabrera, Á. (2003). An exploration of the factors that influence employee participation in Europe. *Journal of World Business*, 38(1), 43-54.
- Campbell, D. J. (1988). Task complexity: A review and analysis. *Academy of management review*, 13(1), 40-52.
- Carvalho, M. M. d., & Rabechini Junior, R. (2015). Impact of risk management on project performance: the importance of soft skills. *International Journal of Production Research*, 53(2), 321-340.
- Cavana, R. Y., Delahaye, B. L., & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative methods*: John Wiley & Sons Australia.
- Chan, D. W., & Kumaraswamy, M. M. (2002). Compressing construction durations: lessons learned from Hong Kong building projects. *International journal of project management*, 20(1), 23-35.

- Chen, H.-G., Jiang, J. J., Klein, G., & Chen, J. V. (2009). Reducing software requirement perception gaps through coordination mechanisms. *Journal of Systems and Software*, 82(4), 650-655.
- Chitkara, K. (2005). *Project Management-Planning, Scheduling and Controlling*-. Tata McGraw Hill, New Delhi.
- Cleden, M. D. (2012). *Managing project uncertainty*: Gower Publishing, Ltd.
- Crawford, L. (2000). Profiling the competent project manager. Paper presented at the Proceedings of PMI Research Conference.
- Crawford, L., Morris, P., Thomas, J., & Winter, M. (2006). Practitioner development: From trained technicians to reflective practitioners. *International Journal of Project Management*, 24(8), 722-733.
- Davis, D. L., Grove, S. J., & Knowles, P. A. (1990). An experimental application of personality type as an analogue for decision-making style. *Psychological Reports*, 66(1), 167-175.
- De Bakker, K., Boonstra, A., & Wortmann, H. (2010). Does risk management contribute to IT project success? A meta-analysis of empirical evidence. *International Journal of Project Management*, 28(5), 493-503.
- de Bakker, K., Boonstra, A., & Wortmann, H. (2012). Risk managements' communicative effects influencing IT project success. *International Journal of Project Management*, 30(4), 444-457.
- De Meyer, A., Loch, C. H., & Pich, M. T. (2002). Managing project uncertainty: from variation to chaos. *MIT Sloan Management Review*, 43(2), 60.
- Diederichs, M. (2013). *Risikomanagement und Risikocontrolling*: Vahlen.
- Dietrich, M. (2010). Efficiency and profitability: A panel data analysis of UK manufacturing firms, 1993-2007.
- Goodman, P. S., & Leyden, D. P. (1991). Familiarity and group productivity. *Journal of Applied Psychology*, 76(4), 578.
- Gray, C. F., & Larson, E. W. (2003). *Project management: the managerial approach*. 2nd. ED, McGraw-Hill, Irwin.
- Gudienė, N., Ramelytė, L., & Banaitis, A. (2013). An Evaluation of Critical Success Factors for Construction Projects using Expert Judgment. Paper presented at the Proceedings in Scientific Conference.
- Gushgari, S. K., Francis, P. A., & Saklou, J. H. (1997). Skills critical to long-term profitability of engineering firms. *Journal of Management in Engineering*, 13(2), 46-56.
- Gupta, S., Kapoor, A., Shankar, R., Pati, P., Muthu, S., Hoang, A., & Chandrasekaran, S. (2010). U.S. Patent No. 7,774,742. Washington, DC: U.S. Patent and Trademark Office.
- Gyorkos, T. (2003). Monitoring and evaluation of large scale helminth control programmes. *Acta tropica*, 86(2), 275-282.
- Han, S. H., Park, S. H., Kim, D. Y., Kim, H., & Kang, Y. W. (2007). Causes of bad profit in overseas construction projects. *Journal of construction engineering and management*, 133(12), 932-943.
- Hwang, B.-G., & Lim, E.-S. J. (2012). Critical success factors for key project players and objectives: Case study of Singapore. *Journal of Construction Engineering and Management*, 139(2), 204-215.
- Jiang, J. J., Klein, G., Wu, S. P., & Liang, T.-P. (2009). The relation of requirements uncertainty and stakeholder perception gaps to project management performance. *Journal of Systems and Software*, 82(5), 801-808.
- Jiang, J. J., Muhanna, W. A., & Klein, G. (2000). User resistance and strategies for promoting acceptance across system types. *Information & Management*, 37(1), 25-36.
- Jody, Z. K., & Ray, R. (2004). *Ten Steps to a Results-Based Monitoring and Evaluation System*: Washington DC: The World Bank.
- Jones, N., Howard, P., & Kelly, P. (2009). Improving Impact Evaluation Coordination and Use. A Scoping Study commissioned by the DFID Evaluation Department on behalf of NONIE (www.odi.org.uk/resources/download/3177.pdf).
- Kerzner, H. (2013). *Project management: a systems approach to planning, scheduling, and controlling*: John Wiley & Sons.
- Kirsch, L. J. (2000). Software project management: An integrated perspective for an emerging paradigm. *Framing the Domains of IT Management: Projecting the Future... Through the Past*, 285-304.
- Kwak, Y. H., & Stoddard, J. (2004). Project risk management: lessons learned from software development environment. *Technovation*, 24(11), 915-920.
- Lædre, O., Austeng, K., Haugen, T. I., & Klakegg, O. J. (2006). Procurement routes in public building and construction projects. *Journal of construction engineering and management*, 132(7), 689-696.
- Marangu, E. M. (2012). Factors influencing implementation of community based projects undertaken by the banking industry in Kenya. a case of Barclays Bank of Kenya.
- Nelson, D. L., & Quick, J. C. (2003). *Organizational Behavior: Foundations. Realities and Challenges*, 4.
- Ngure, E. W. (2013). Determinants influencing performance of agricultural projects: A case of NALEP projects in Ruiru District, Kiambu County, Kenya (Doctoral dissertation).
- Nwanchukwu, C. C. & Fedelis, I. E. (2011). Building Construction Management Success as critical issue in real estate development and investment. *American Journal of Social and Management Sciences*, 2 (1) 56-75.
- Odusami, K. (2002). Perceptions of construction professionals concerning important skills of effective project

- leaders. *Journal of Management in Engineering*, 18(2), 61-67.
- Ofori, G. (2014). Nature of the Construction Industry, its needs and its development: A Review of four decades of research. *Proceedings of the CIB W107 International Conference*, 28th-30th January (pp. 10-19). Lagos, Nigeria: CIB W107.
- Perminova, O., Gustafsson, M., & Wikström, K. (2008). Defining uncertainty in projects—a new perspective. *International Journal of Project Management*, 26(1), 73-79.
- Pich, M. T., Loch, C. H., & Meyer, A. D. (2002). On uncertainty, ambiguity, and complexity in project management. *Management science*, 48(8), 1008-1023.
- Ropponen, J., & Lyytinen, K. (2000). Components of software development risk: How to address them? A project manager survey. *IEEE transactions on software engineering*, 26(2), 98-112.
- Sauer, C., Jeffery, D. R., Land, L., & Yetton, P. (2000). The effectiveness of software development technical reviews: A behaviorally motivated program of research. *IEEE Transactions on Software Engineering*, 26(1), 1-14.
- Sharma, A., & Gupta, A. (2012). Impact of organisational climate and demographics on project specific risks in context to Indian software industry. *International Journal of Project Management*, 30(2), 176-187.
- Stem, C., Margoluis, R., Salafsky, N., & Brown, M. (2005). Monitoring and evaluation in conservation: a review of trends and approaches. *Conservation Biology*, 19(2), 295-309.
- Tesch, D., Sobol, M. G., Klein, G., & Jiang, J. J. (2009). User and developer common knowledge: Effect on the success of information system development projects. *International Journal of Project Management*, 27(7), 657-664.
- Tesluk, P. E., Vance, R. J., & Mathieu, J. E. (1999). Examining employee involvement in the context of participative work environments. *Group & Organization Management*, 24(3), 271-299.
- Thite, M. (1999). Identifying key characteristics of technical project leadership. *Leadership & Organization Development Journal*, 20(5), 253-261.
- Valencia, V. V. (2007). A project manager's personal attributes as predictors for success: DTIC Document.
- Wanous, J. P., Reichers, A. E., & Austin, J. T. (2000). Cynicism about organizational change measurement, antecedents, and correlates. *Group & Organization Management*, 25(2), 132-153.
- Yap, P., & Ferreira, A. (2010). The complex and multifaceted world of performance management in NGOs: a case study. Unpublished Dissertation, Monash University, Australia.
- Yetton, P., Martin, A., Sharma, R., & Johnston, K. (2000). A model of information systems development project performance. *Information Systems Journal*, 10(4), 263-289.
- Zwikaël, O., & Globerson, S. (2006). From critical success factors to critical success processes. *International Journal of Production Research*, 44(17), 3433-3449.